I. Executive Summary

a. Project Title: **Mt. Diablo Mercury Mine Site Remediation and Mercury Export Reduction Project.**
Applicant: Contra Costa County Department of Public Works.

b. Project Description and Primary Biological/Ecological Objectives: This project will provide remediation for a prominent, abandoned mercury mine which exports significant quantities of mercury into Marsh Creek and, subsequently, directly into the Bay-Delta near Antioch approximately 20 miles downstream (Figs. 1, 2). Directed remediation at this well-studied site will (1) reduce the flux of mercury from the site to the Bay-Delta and (2) will provide a much-needed test case and quantification of the effectiveness of mercury mine site remedial options in California. Remediation will center around the reduction of water flow through the exposed mercury tailings piles of the site. Storm season water flow through these piles has been demonstrated to result in the export from the site of approximately 90% of the total mercury loading of the entire Marsh Creek watershed (Fig. 3). This mercury has also been shown to be initially mobilized from the piles in the dissolved state (Fig. 2), highly mobile and available for downstream transport, transformation to the toxic methyl form, and uptake by aquatic organisms. By reducing the flow of water through the tailings, a corresponding reduction in the export of bioavailable mercury should be realized. This will be accomplished by diverting water sources that originate from outside the tailings zone and diminishing the movement of direct precipitation into and through the tailings.

c. Approach/Tasks/Schedule: The major components of the project (Figs. 4, 5) include (1) diversion of surficial, groundwater, and spring flows around and out of the tailings, (2) re-grading of the tailings to a gentler slope, (3) covering the tailings material with a 2-foot thick layer of soil, (4) planting appropriate native, high-evapotranspirative shrubs which will ultimately remove the majority of rain-derived water in this soil layer annually through normal evapotranspiration, and (5) extensive monitoring of appropriate on-site and downstream parameters before, during, and after remediation to quantify the reduction in downstream mercury loading as well as the reduction in mercury uptake by biota. This will be a three year project, with assessment monitoring likely continuing beyond this period. Initial work will include the finalization of engineering plans for tailings work and water diversion channels and piping. All construction work will be done during the generally dry months of May-October, may be conducted in phases, or if possible during one construction season. The major construction components of the project are projected to require work in both Year 1 and Year 2. Third year work will be limited to revegetation tending and assessment monitoring of the watershed. Individual tasks are as follows: Task 1-pre-construction activities/design (final planning of tailings re-grading, cover layer, diversion channel and pipe routes for external flows and potential on-site springs deriving from upslope and revegetation/irrigation); Task 2-construction of primary diversion channels and piping which will route the majority of water derived from offsite around the tailings during and after construction; Task 3-tailings slope reduction; Task 4-delivery and grading of the soil layer; Task 5-revegetation of the site; Task 6-routing of any significant potential on-site spring flow out of the tailings; Task 7-tending of planted vegetation for a specified warranty period; Task 8-(optional)-perform a study to address potential modification/mitigation of the existing sedimentation pond; Task 9-on-site and downstream monitoring (conducted throughout all phases).

d. Justification for Project and Funding by CALFED: This project is designed to significantly reduce the loading of bioavailable mercury to Marsh Creek, which empties directly into the Bay-Delta at Big Break near Antioch. Bioaccumulating, bioconcentrating mercury is an ecosystem stressor that impacts most, if not all, priority habitats and species within the Bay-Delta system. Mercury contamination is a particular problem in this region of California as a result of historic mining activities, which have resulted in numerous sources of bulk contamination. Health advisories exist within the Bay-Delta system for numerous fish species used for human consumption (SFEI 1997). The direct and additive effects of mercury on other fish species, juvenile life stages, and non-human fish consumers are unknown at this time, but of particular concern. The proposed remediation work at the Mt. Diablo Mine is described precisely by CALFED Action 22B: "Reduce metal loadings (e.g. mercury) to the Delta and its tributaries by implementation of moderate on-site mine drainage remediation measures developed in site-specific studies at abandoned mine sites". The watershed and mine site studies have been completed, as well as three years of baseline data collection. Water, sediment, and biological indicators have

been identified for assessment of remediation effectiveness, both during and after work at the mine site. This mercury mine is an ideal candidate for remedial work that will (1) reduce the loading of mercury to the Bay-Delta and (2) function as a demonstration project that will provide invaluable information to guide potential future remediation work at numerous other abandoned mercury mine sites throughout the Bay-Delta watershed.

e. Budget Costs and Third Party Impacts: The full cost of the 3 year remediation project is estimated to be $1,406,000, as broken down by task in attached Table 1. The construction cost estimate has not considered any extraordinary construction methods necessary to manage the mine's tailings. Only minor third party impacts are projected, primarily relating to temporary truck traffic to and from the site in conjunction with the importation of and, to a lesser extent, the occasional delivery of construction supplies, plantings, and earth moving equipment. Deliveries will be scheduled to avoid high traffic periods, if applicable. The roads in the vicinity of the site are rural with relatively light traffic. In the event of a significant spill of topsoil, etc. along County roads in relation to this project, the County will dispatch a road crew to remove the obstruction. Conceivably, the manipulation of the mine tailings could temporarily result in a net increase in the mercury and sediment loads exported from the site during and immediately following construction. However, numerous precautions are built into the project to preclude or minimize this effect, including the limitation of heavy construction to dry months and the construction of diversion channels around the site early in the project.

f. Applicant Qualifications: The Contra Costa County Department of Public Works has extensive experience planning and conducting a wide variety and magnitude of public works projects. Personnel and mechanisms are in place for the development of this project, sub-contracting as necessary, and administration. The monitoring aspect of the program, as well as general project oversight, will be provided by Dr. Darell Slotton of the University of California at Davis. Slotton is a recognized expert in the field of mercury biogeochemistry in California and internationally. He has acted as consultant to Contra Costa County on this issue since 1995 and is well acquainted with the site and the objectives of the project.

g. Monitoring and Data Evaluation: Intensive monitoring of the effectiveness of this mine site manipulation will be an integral part of the project. This mine is unique in California as it is already the site of a major mercury monitoring and research project which has defined appropriate environmental indicators which will be used to assess and quantify the results of any remediation work. Three years of recent baseline data have been collected immediately prior to this proposal. Extensive data are available for mercury in water, sediments, and a variety of aquatic biota, across a range of different water years. A mass loading study of the mercury contribution of the mine site, in relation to the rest of the watershed, was conducted in 1995. The proportional input of the exposed mine tailings at that time was approximately 90%. This diverse monitoring approach will be repeated during and after remedial work at the mine site, facilitating the quantification of improvements in loading rates and biological uptake.

h. Local Support/Coordination with other Programs/Compatibility with CALFED Objectives: This project has extensive support at local, County, and State levels. The Contra Costa Hazardous Materials Programs Division has been a very supportive collaborator in the work since 1995. A letter of support is attached from the Contra Costa Clean Water Program (cities, Flood Control District and County under a joint municipal NPDES stormwater permit in Contra Costa County). The Central Valley Regional Water Quality Control Board has been supportive of the proposal as a feasible means to reduce mercury
contamination to the Delta through remediation measures at an abandoned mine site and as a pilot project to learn the most effective methods for mine remediation projects. The San Francisco Bay Regional Water Quality Control Board is interested in the project and may provide future financial support. Results of the project will be followed closely by other CALFED mercury programs, including USGS work and, particularly, the UC Davis watershed-wide program which will be determining the most appropriate next candidates for source remediation and investigating the fate of the various exported inorganic mercury fractions within the system. The Mt. Diablo project is entirely compatible with CALFED objectives. It will directly address a known source of mercury to the Bay-Delta, significantly lowering inputs. It will additionally provide crucial information and indicate most cost-effective approaches which will guide future, related remedial activities at sites throughout the greater Bay-Delta watershed.

Title of Project:

Mt. Diablo Mercury Mine Site Remediation and Mercury Export Reduction Project

Applicant:

Contra Costa County Department of Public Works

255 Glacier Drive, Martinez, CA, 94553
Telephone: (510) 313-2000, Fax: (510) 313-2333

Type of Organization and Tax Status: Public (County Agency)

Tax Identification Number: 94-6000509

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RFP Project Group Type: Construction/Public Works

III. Project Description

a. Project Description and Approach

This project will provide remediation for a prominent, abandoned mercury mine which exports significant quantities of mercury into Marsh Creek and, subsequently, directly into the Bay-Delta near Antioch approximately 20 miles downstream (Figs. 1, 2). The ecosystem stressor mercury is a water quality constituent of major concern in California. Directed remediation at this well-studied site will (1) reduce the flux of mercury from the site to the Bay-Delta and (2) will provide a much-needed test case and quantification of the effectiveness of mercury mine site remedial options in California.

Remediation will center around the reduction of water flow through the exposed mercury tailings piles at the Mt. Diablo Mercury Mine site. Storm season water flow through these piles has been demonstrated to result in the export from the site of approximately 90% of the total mercury loading of the entire Marsh Creek watershed (Fig. 3, Slotton et al. 1996). This mercury has also been shown to be initially mobilized from the piles in the dissolved state (Fig. 2), highly mobile and available for downstream transport, methylation, and uptake by aquatic organisms. By significantly reducing the contact of water with the tailings, and the flow of water through and out of the tailings, a significant reduction in the export of bioavailable mercury should be realized. Minimizing the flow of water through the tailings can be accomplished by (a) diverting any water sources that originate from outside the tailings zone and (b) diminishing the movement of direct precipitation into and through the tailings.

The major components of the project (Figs. 4, 5) include (1) diversion of surficial, groundwater, and spring flows around and out of the tailings, (2) re-grading of the tailings to a gentler slope, (3) covering the tailings material with a 2-foot thick layer of soil, (4) planting appropriate native, high-evapotranspirative shrubs which will ultimately remove the majority of rain-derived water in this soil layer annually through normal evapotranspiration, and (5) extensive monitoring of appropriate on-site and downstream parameters before, during, and after remediation to quantify the reduction in downstream mercury loading as well as the reduction in mercury uptake by biota.

- Water Diversion: Diversion of upslope surface and groundwater flows away from the tailings will be accomplished through the construction of a series of channels above and to the sides of the existing tailings. This single effort should result in a large reduction in the amount of water passing through the tailings material. Channels will be trenched deep enough to intercept dominant near-surface flows as well as overland flows from up-slope on Mt. Diablo. Channels will be angled sufficiently to promote through-flow and preclude the pooling of water within the channels. As part of this operation, upper Horse Creek will be diverted directly to Dunn Creek by culvert, bypassing the tailings. Orehouse Spring, which has been demonstrated to have relatively low mercury loads, will be diverted to My Creek and away from the tailings and sediment pond. If additional significant spring sources are located within the existing tailings slope, they will also be routed away from the tailings and settling pond by pipe. As part of Task 1, a soils consultant will perform a comprehensive soils investigation of the site which will include reviewing old mine working maps and State Mines and Geology archive files for any evidence of potential subsurface leakage.

- Tailings Slope Reduction: Prior to covering the tailings with soil and revegetating, a major component of the remedial work will involve the re-working of the tailings with earth-moving equipment to stabilize the slope and lessen the angle, sufficient to maintain subsequent soil covering and plantings. This will be accomplished primarily with bulldozers, earth movers and other heavy equipment. Slope modification plans will attempt to retain the existing patch of stabilized tailings that exists in the middle of the site with well-developed trees and shrubs. Slope modification will be focused on the extensive reaches of barren, unvegetated tailings. However, if it is discovered during design or construction stages that soil cover is necessary in the area of the existing patch of vegetation, this patch may need to be removed, covered, and revegetated as part of the project. All construction activity will be guided by a Health and Safety Plan and other formal written documents describing steps to be taken to protect workers and the environment.

● Tailings Capping With Soil: With the majority of upslope-derived water diverted around the reactive, high mercury tailings material, the principal ongoing source of water to the piles will be direct precipitation onto the site. Direct water inputs to the tailings from precipitation will be significantly lessened with the addition of soil and appropriate revegetation. The effectiveness of this technique is maximized by the application of a soil cover that is sufficiently thick to absorb much of the precipitation which falls annually on the covered area. Soil will be supplied from stockpiles existing within Contra Costa County and will be transported to the site with dump trucks. The soil will be applied to the surface of the tailings and graded with appropriate heavy equipment in a manner consistent with contractor's Health and Safety Plan. Through the subsequent careful revegetation of the slope with appropriate, hardy plant species, much or all of this soil water can be annually taken up and removed to the atmosphere through evapotranspiration. This evapotranspirated water is thus not available for movement through the reactive tailings material.

● Revegetation: While grasses may be most efficient at initially stabilizing the slope, perennial shrubs and trees exhibit the greatest rates of evapotranspiration and have therefore been found to be the most effective in removing accumulated soil water (Mary Ann Showers, California Department of Conservation, personal communication). Revegetation at this site will therefore include the initial stabilization of the new soil with grass hydro-mulching, together with the planting of appropriate tree and shrub species which should eventually dominate the site. Revegetation schemes for the mine site have been developed and revegetation experts are familiar with the site and available for implementation work.

● Monitoring: (see section 3f below)

b. Location and/or Geographic Boundaries of Project

The Mt. Diablo Mercury Mine is a large, abandoned mercury mine located on the northeast side of Mt. Diablo in Contra Costa County (Figs. 1, 2). The mine site is within the Marsh Creek watershed, adjacent to Dunn Creek, which is a small tributary to Marsh Creek. The site is approximately one half mile south of the intersection of Marsh Creek Road and Morgan Territory Road. Construction work will occur at the abandoned mine site (Fig. 4). Monitoring work will occur at the mine site and downstream at a series of previously utilized stations (Fig. 5). Drainage from this abandoned mine flows into Dunn Creek, which passes into Marsh Creek approximately 2 miles downstream. Marsh Creek flows through the shallow Marsh Creek Reservoir approximately 10 miles downstream of the mine, passes through the towns of Brentwood and Oakley and then empties into the Bay-Delta near Antioch approximately 20 miles downstream of the mine. Monitoring stations will be located throughout this stretch, as previously utilized in baseline work. Soil for capping the tailings will be obtained within Contra Costa County, as will the truck routes to deliver this material. Much effort will be given to trying to locate a local source within two or three miles for the borrowed site.

c. Expected Benefits

This project is designed to significantly reduce the loading of bioavailable mercury to Marsh Creek, which empties directly into the Bay-Delta at Big Break near Antioch. Bioaccumulating, bioconcentrating mercury is an ecosystem stressor that impacts most, if not all, priority habitats and species within the Bay-Delta system. Mercury contamination is a particular problem in this region of California as a result of historic mining activities, which have resulted in numerous sources of bulk contamination. Health advisories exist within the Bay-Delta system for numerous fish species used for human consumption. The direct and additive effects of mercury on other fish species, juvenile life stages, and non-human fish consumers are unknown at this time, but of particular concern.

In addition to reducing a direct source of bioavailable mercury to the Bay-Delta, the proposed project at the Mt. Diablo mercury mine is of great interest to a variety of state and local agencies as a general example of mercury

mine site remediation effectiveness. This site and its relatively small watershed is uniquely situated for the quantification of mercury loading, as well as its ongoing re-assessment during and after remediation efforts. A number of additional, abandoned, leaking mercury mines exist in more distant reaches of the Bay-Delta watershed. Current research indicates that abandoned mercury mines may be the dominant sources of the readily methylated portion of the Bay-Delta's total mercury load. Particular interest has been focused on the Cache Creek drainage, which has been shown to carry very large mercury loads into the Yolo Bypass during high flows (Central Valley Regional Water Quality Control Board, unpublished data). Agencies have been hesitant to commence large-scale remediation projects at remote mine sites without an indication of their potential success, particularly in light of the mercury-enriched nature of the surrounding terrain. The studies in the Marsh Creek watershed have provided a new understanding of the relative importance of exposed mercury mine workings to downstream loading and bioaccumulation. The Mt. Diablo Mercury Mine, with its small watershed and comprehensive data base, offers a unique test case that can be carefully assessed. Results of this work will guide future mercury remediation projects that could significantly reduce additional, important sources of mercury loading to the Bay-Delta.

d. Background and Biological/Technical Justification

The abandoned Mt. Diablo Mercury Mine has been identified for many years as a mercury exporting source that could benefit from remediation (Ross 1940, Levine-Fricke 1993, Contra Costa County 1994, CVRWQCB 1994). Marsh Creek Reservoir, a small, shallow flood control structure located approximately 10 miles downstream of the mine, does not constitute a significant barrier to downstream transport of Marsh Creek water quality constituents during storm flows, including mercury derived from the mine (Slotton et al. 1996). Below the reservoir, Marsh Creek passes through the towns of Brentwood and Oakley before emptying directly into the Bay-Delta at Big Break near Antioch. The mine site is located approximately 20 miles upstream of the confluence with the Bay-Delta.

A substantial area of exposed tailings is present at the site (Fig. 1) and, while this region contributes only a small fraction of the total flow in the watershed, it has been assumed for many years to be a major contributor to the downstream mercury accumulations documented in Marsh Creek and Marsh Creek Reservoir (TSMP 1990, Slotton et al. 1996). A series of sediment settling ponds were constructed in 1980 to intercept suspended sediment from the tailings region. Subsequently, water collections made in the vicinity of the mine by the Central Valley Regional Water Quality Control Board demonstrated significantly elevated mercury concentrations (CVRWQCB 1994). However, these tests did not include the rest of the watershed and did not have a low enough level of analytical detection to obtain useful data from any but the most extremely contaminated samples. Consequently, this earlier work could not determine the relative loading of mercury to the watershed from the mine on a mass balance basis.

In 1995, the Contra Costa County Department of Public Works commissioned a comprehensive assessment of mercury contamination and loading throughout the Marsh Creek watershed. Before undertaking additional remediation efforts at the mine site, the County and its consultants felt that it was critical to determine the relative importance of the site to the watershed's total mercury loading.

Mercury is naturally enriched throughout extensive areas of the Mt. Diablo region, which is why mercury was historically mined there (Ross 1940). As the majority of the water flow and associated transported material in the Marsh Creek watershed appeared to derive from tributaries other than the one containing the Mt. Diablo mine, it was quite conceivable that a significant proportion of the total Marsh Creek mercury budget might come from more generalized watershed sources. Despite the locally contaminated nature of the mine vicinity itself, if the majority of total mercury loading came from generalized sources throughout the watershed, mitigation work at the mine could be relatively ineffectual.

The Marsh Creek Watershed 1995 Mercury Assessment Project (Slotton et al. 1996) clearly established that downstream mercury loading was not consistent with a generalized watershed source. The mine site was in fact

shown to constitute the overwhelming, ongoing source of mercury to the watershed. Mercury data from extensive collections of water and invertebrate bioindicator organisms strongly implicated the mine region as the dominant source of mercury. Mass balance calculations indicated that approximately 95% of the total input of mercury to the upper watershed derives from Dunn Creek, with an estimated 88% traceable specifically to the exposed tailings piles of the Mt. Diablo Mercury Mine (Fig. 3). The data additionally indicated that the great majority of the mercury load emanating from the tailings is initially mobilized in the dissolved state (Fig. 2), highly available for rapid downstream transport, transformation into the highly toxic methyl form, and partitioning into aquatic organisms.

Downstream loading of mercury to the Bay-Delta from this source was found to be in the range of 10-30 grams per day during moderately elevated flows one week after a series of storms (Figs. 1, 2). Loading during actual storm events is estimated to range considerably higher. As this mercury enters the system primarily in dissolved form, it is not comparable on a gram-for-gram basis with highly bound, particulate mercury sources such as dental amalgams and erosional cinnabar particulates. While the majority of dissolved mercury from the mine region was found to rapidly partition onto freshly-precipitated small particulates, this surface adsorption and the small particle size apparently maintain the mercury in an easily transportable and relatively bioavailable form. The mine-derived mercury in Marsh Creek was found to be quite bioavailable, with massively elevated accumulations occurring in aquatic organisms of Dunn Creek and significantly elevated biotic mercury concentrations continuing downstream along Marsh Creek. Fish in Marsh Creek Reservoir were found to contain elevated mercury in edible fillet muscle, at concentrations between one and three times the 0.5 ppm health advisory level.

Marsh Creek represents a direct source of relatively bioavailable mercury to the Bay-Delta. As compared to most other important mercury mine sites in the California Coast Range, the Mt. Diablo Mercury Mine is located close to the Bay-Delta and without the mercury-intercepting influence of deep reservoirs, slough regions, bypasses, etc. Because of the documented highly localized nature of the dominant mercury source, it has been determined that remediation work at the mine site could significantly reduce Marsh Creek's loading of bioavailable mercury to the Bay-Delta. The proposed work represents a low-to-moderate cost approach to the problem, as compared to extremely expensive sediment capping options that can run to well over ten million dollars per site. We hasten to point out that this remedial effort cannot be guaranteed to completely eliminate the problem. However, pre-project studies indicate that any significant decrease in water flow through the reactive tailings material will be beneficial. We are utilizing a basic scheme of external flow diversion, simple soil cover, and revegetation because (1) funding is limited for this project and (2) the more expensive techniques, while possibly feasible for one or several sites, would be cost-prohibitive for the many potential target mine remedial sites that are likely to ultimately require attention in the tributaries of the greater San Francisco Bay watershed. If a relatively low cost approach is significantly effective, that will be very useful information for the wider goal of statewide mercury remediation.

This project is highly consistent with CALFED objectives, as well as those of Contra Costa County. Mercury, and particularly bioavailable mercury, is an important Bay-Delta Water Quality Parameter of Concern. The proposed remediation work at the Mt. Diablo Mine is described precisely by CALFED Action 22B:

> "Reduce metal loadings (e.g. mercury) to the Delta and its tributaries by implementation of moderate on-site mine drainage remediation measures developed in site-specific studies at abandoned mine sites. (Mine Drainage)"

The watershed and mine site studies have been completed, as well as three years of baseline data collection. Water, sediment, and biological indicators have been identified for assessment of remediation effectiveness, both during and after work at the mine site. This monitoring will be an integral part of the project. This mercury mine is an ideal candidate for remedial work that will (1) reduce the loading of mercury to the Bay-Delta and (2) function as a demonstration project that will provide invaluable information to guide potential future remediation work at numerous other abandoned mercury mine sites throughout the Bay-Delta watershed.

e. Proposed Scope of Work

This will be a three year project, with assessment monitoring likely continuing beyond this period. Initial work will include the finalization of engineering plans for tailings work and water diversion channels and piping. All construction work at the site will be done during the generally dry months of May-October, and will be conducted in phases. The major construction components of the project are projected to require work in both Year 1 and Year 2. Third year work will be limited to minor construction modifications as required, revegetation tending, and assessment monitoring of the watershed.

Phase 1 will include the identification and planning of diversion channel and pipe routes for external flows and potential on-site springs deriving from upslope. It will also include the final planning of tailings re-grading and the collection of water quality information from the existing main sedimentation pond. An environmental consultant will be employed to ensure that Health and Safety Plans are developed and that other environmental regulations are being adhered to. (These pre-construction activities, together, constitute Task 1).

Phase 2 will include the construction of primary diversion channels and piping which will route the majority of water derived from offsite around the tailings during and after construction (Task 2).

Phase 3 will consist of tailings slope reduction (Task 3) and the depositing and grading of the soil layer (Task 4).

Phase 4 will include the revegetation of the site with appropriate grasses, shrubs, and trees (Task 5), and the routing of any significant potential on-site spring flow out of the tailings (Task 6).

Phase 5 will involve the tending of planted vegetation (Task 7). A study to address potential modification/mitigation of the sedimentation pond may be conducted at this time (optional Task 8).

On-site and downstream monitoring (Task 9) will be conducted throughout all phases. In addition to quarterly progress reports, comprehensive annual reports will be produced each year which summarize remedial activities and synthesize the monitoring data.

f. Monitoring and Data Evaluation

Intensive monitoring of the effectiveness of this mine site manipulation will be an integral part of the project. This mine is unique in California as it is already the site of a major mercury monitoring and research project which has defined appropriate environmental indicators which will be used to assess and quantify the results of any remediation work. Three years of recent baseline data have been collected immediately prior to this proposal. Extensive data are available for mercury in water, sediments, and a variety of aquatic biota, across a range of different water years. A mass loading study of the mercury contribution of the mine site, in relation to the rest of the watershed, was conducted in 1995. The proportional input of the exposed mine tailings at that time was approximately 90%. This diverse monitoring approach (Fig. 5) will be repeated during and after remedial work at the mine site, facilitating the quantification of improvements in loading rates and biological uptake. Data will be compared to extensive databases from other California mercury studies and data evaluations will be peer-reviewed by other groups specialized in various aspects of mercury biogeochemistry and mine site processes.

g. Implementability

As a County project, the proposed work will be implemented in compliance with applicable laws, regulations, permits, environmental compliance, etc. The project has been in development for 3 years, utilizing a regional expert in applied mercury issues and an open public forum approach to decision making throughout that period. Outreach has been extensive and virtually all parties impacted by the site and/or interested in the project have had the opportunity to participate in the process. The applicant agency has already contributed approximately $80,000 toward this project in pre-project studies, baseline monitoring, and outreach. Coordination will be

extensive and ongoing with other local and state agencies, notably the Contra Costa Hazardous Materials Programs Division and the San Francisco Bay and Central Valley Regional Water Quality Control Boards. There will also be extensive coordination with other CALFED mercury programs, which will be carefully following the results of this project. Although protection of downstream reaches from exported hazardous materials is the overall purpose of the project, considerations of hazardous materials in general will be overseen by an independent, environmental consultant who will review environmental regulations and the history of the site. Work will begin immediately upon notification of funding, and major construction will commence within the first year. Any maintenance required following completion of the construction work or liability issues resulting from said work will be the responsibility of the property owners, not the County.

IV. Costs and Schedule to Implement Proposed Project

a. Budget Costs

The entire project is projected to cost $1,406,000. A budget breakdown is attached as Table 1.

b. Schedule Milestones

(See attached Table 2.)

c. Third Party Impacts

Only minor impacts are projected, with the primary one of these relating to temporary truck traffic to and from the site in conjunction with the importation of soil and, to a lesser extent, the occasional delivery of construction supplies, plantings, and earth moving equipment. Much effort will be given to trying to locate a local source within two or three miles for the borrowed site. Deliveries will be scheduled to avoid high traffic periods, if applicable. The roads in the vicinity of the site are rural with relatively light traffic. In the event of a significant spill of soil, etc. along County roads in relation to this project, the County will dispatch a road crew to remove the obstruction. Engineering design will address potential impacts to downstream property owners from the rerouting of Dunn's and other creeks. If changes to the flow and volume are expected, plan design will address necessary mitigation measures .

Conceivably, the manipulation of the mine tailings could temporarily result in a net *increase* in the mercury and sediment loads exported from the site during and immediately following construction. However, numerous precautions are built into the project to preclude or minimize this effect, including the limitation of heavy construction to dry months and the construction of diversion channels around the site early in the project.

Considerable thought has gone into the issue of the settling pond at the base of the tailings. In its current configuration, the settling pond is largely ineffectual, maintaining mercury in primarily dissolved form which moves out of the pond to downstream with any water flow. The pond could be modified to effectively precipitate and settle out the majority of the mercury entering it. However, without post-project attention, such a pond could revert to a dissilution basin. Additionally, even with a pond functioning effectively to sediment out mercury, the danger exists that, with a high flow storm event, this material could be transported out of the pond in a concentrated "slug" to downstream, temporarily potentially exceeding acute toxicity levels. In contrast to this scenario, the continual export of much lower mercury loads could be preferable. Ideally, following remedial construction, the flow of acid mine seepage out of the tailings will be reduced sufficiently that it can be contained within the existing or slightly modified settling pond without spilling over to downstream. Therefore utilization of a modified settling pond as an optional portion of the project can only be determined based on more extensive study during and immediately following the main construction tasks. Research will include environmental regulation and a thorough study of how such ponds have been managed effectively at other sites. In the event that a modified settling pond is utilized, it is anticipated that any post-project dredging material periodically removed from the pond can be deposited with the existing tailings and within the borders of the diversion channels. Any potential dredging would be constrained to dry months when no water was flowing from the pond to downstream.

V. Applicant Qualifications

The Contra Costa County Department of Public Works has extensive experience planning and conducting a wide variety of public works projects. Personnel and mechanisms are in place for the development of this project, sub-contracting as necessary, and administration. Recent projects include:

- Hill 310 (Bay Point) Slide Repair where a deep landslide was repaired by the placement of approximately 107,000 cubic yards of soil to buttress the hillside;
- Camino Tassajara Road Realignment at Finley Road was a construction project that consisted of moving approximately 38,000 cubic yards of material (ie. soil) over the project length of 0.42 miles;
- Cummings Skyway Extension project is currently being designed and it will include a mass grading/earthwork operation where 250,000 cubic yards of material will be moved over the project length of 0.50 miles;
- State Route 4 Bypass (segment 2) is also under design and will include a mass grading/earthwork operation where approximately 250,000 cubic yards of material will be moved over the project length of 2.8 miles.

The monitoring aspect of the program, as well as general project oversight, will be provided by Dr. Darell Slotton of the University of California at Davis. Slotton is a recognized expert in the field of mercury biogeochemistry in California and internationally. He has acted as consultant to Contra Costa County on this issue since 1995, conducting a series of high quality studies which defined the role of the abandoned Mt. Diablo Mercury Mine tailings in the mercury budget of the Marsh Creek watershed. His group has also identified key indicator samples for use in defining the ongoing mercury loading of the system and quantifying potential changes which may result from any manipulations at the site. He has an extensive background in the research and applied aspects of heavy metal-related pollution problems, with a primary focus on mercury in California.

VI. Compliance With Standard Terms and Conditions

Please see attached forms.

Contra Costa County. 1994. Cowell Ranch Project, Administrative Draft EIR, October 10, 1994.

CVRWQCB. 1994. Mt. Diablo Mercury Mine, Contra Costa County. Memo from Alexander MacDonald of the Central Valley Regional Water Quality Control Board to Jack Wessman and the Contra Costa County Health Services Department, December 27, 1994.

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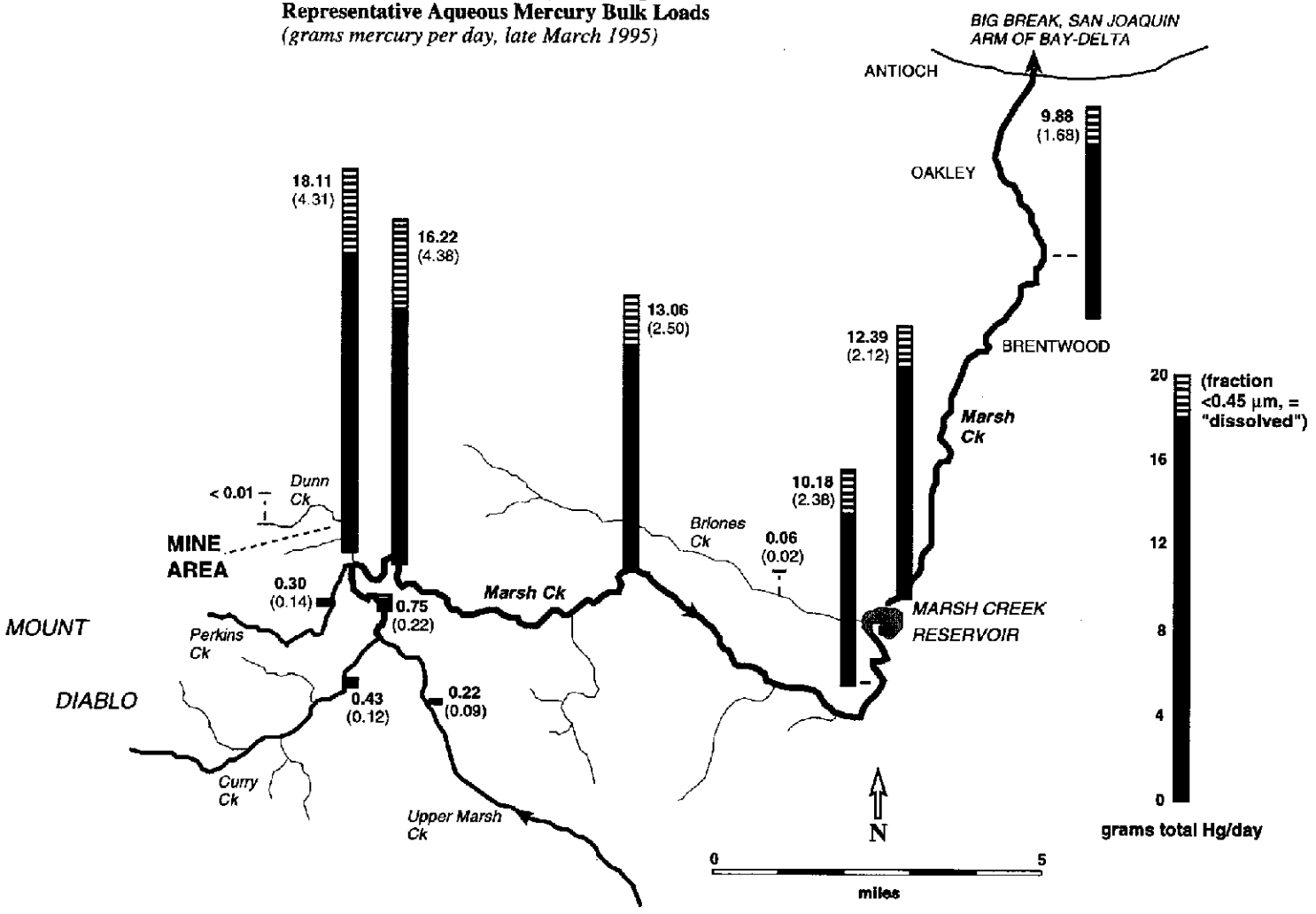
Slotton, D.G., S.M. Ayers, and J.E. Reuter. 1996. Marsh Creek watershed 1995 mercury assessment project. *Final Report for Contra Costa County*, March 1996, 66 pp.

TSMP 1990. Toxic Substances Monitoring Program: Ten year summary report, 1978-1987. *State of California Water Resources Control Board publication* 90-1WQ, August 1990. Prepared by Del Rasmussen and Heidi Blethrow, Division of Water Quality.

Figure 1. Marsh Creek Watershed Regional Map and Representative Aqueous Mercury Bulk Loads
(grams mercury per day, late March 1995)



I-005267

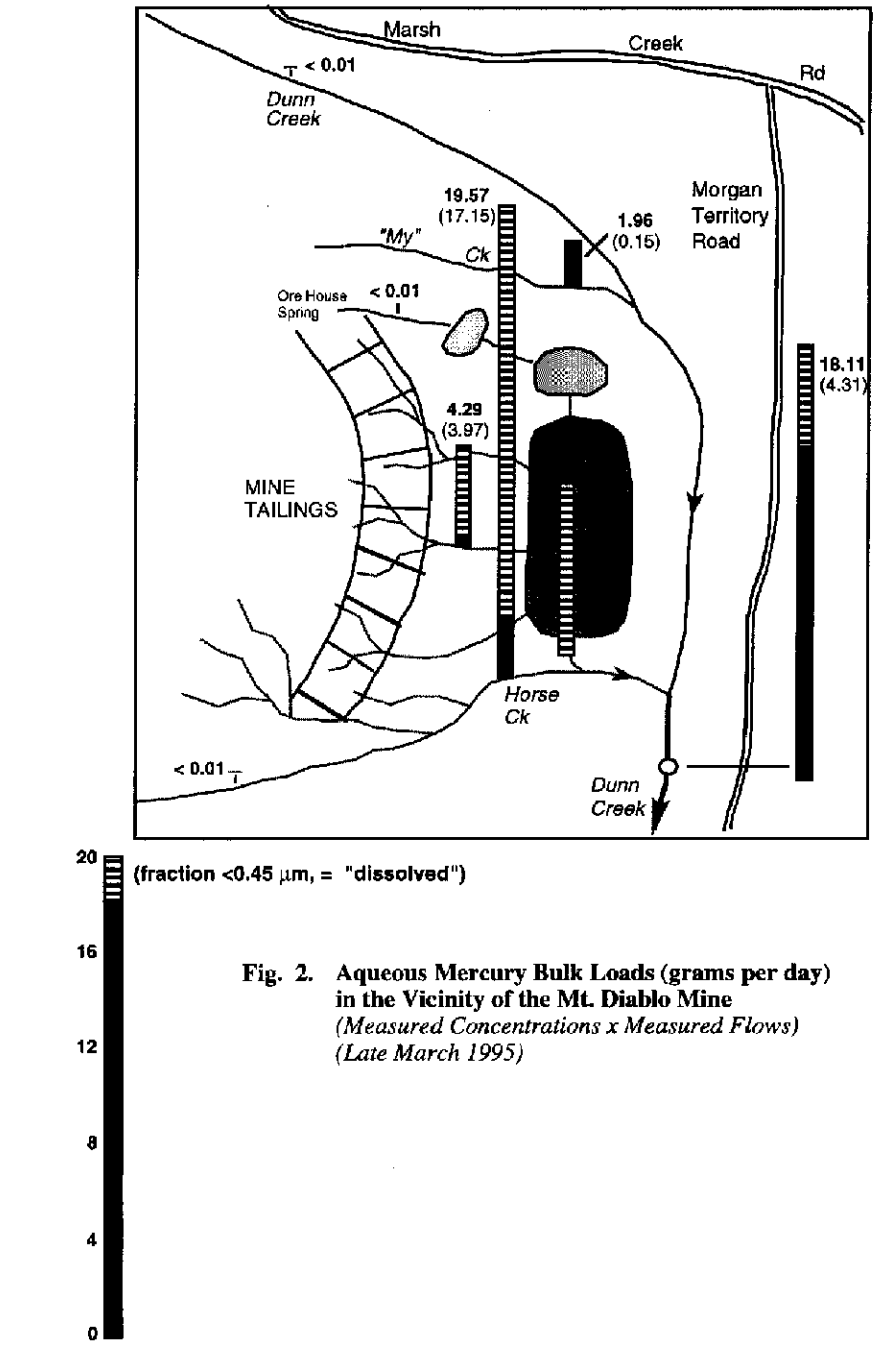


Fig. 2. Aqueous Mercury Bulk Loads (grams per day) in the Vicinity of the Mt. Diablo Mine
(Measured Concentrations x Measured Flows)
(Late March 1995)

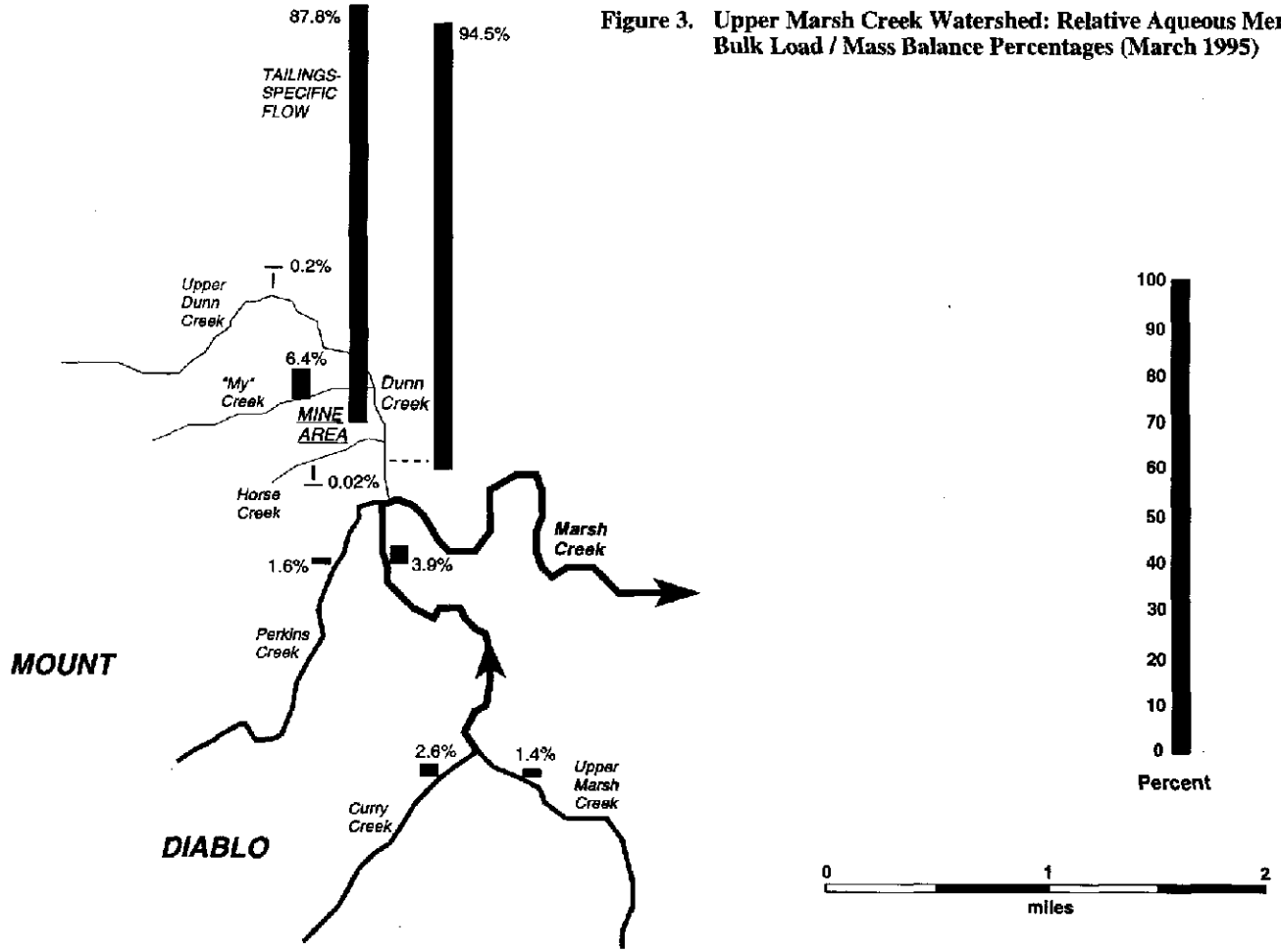
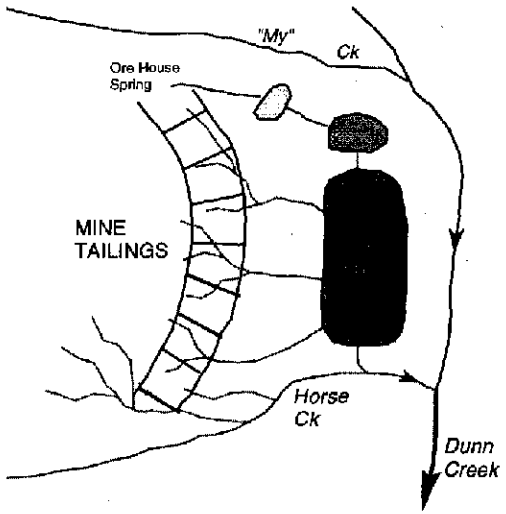
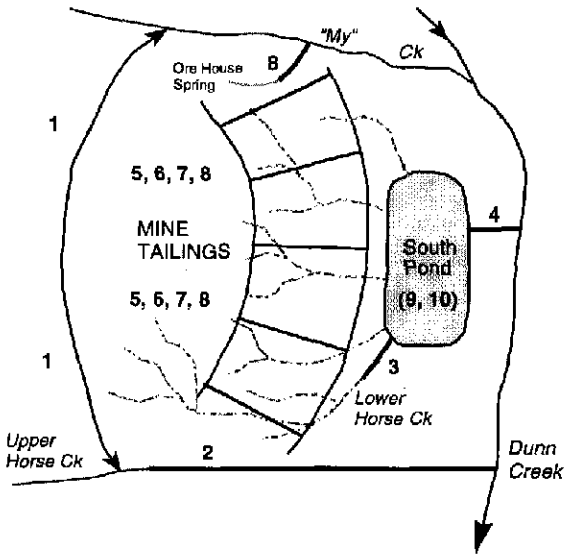


Figure 3. Upper Marsh Creek Watershed: Relative Aqueous Mercury Bulk Load / Mass Balance Percentages (March 1995)

Figure 4. Current Mine Site Configuration vs Proposed Modifications



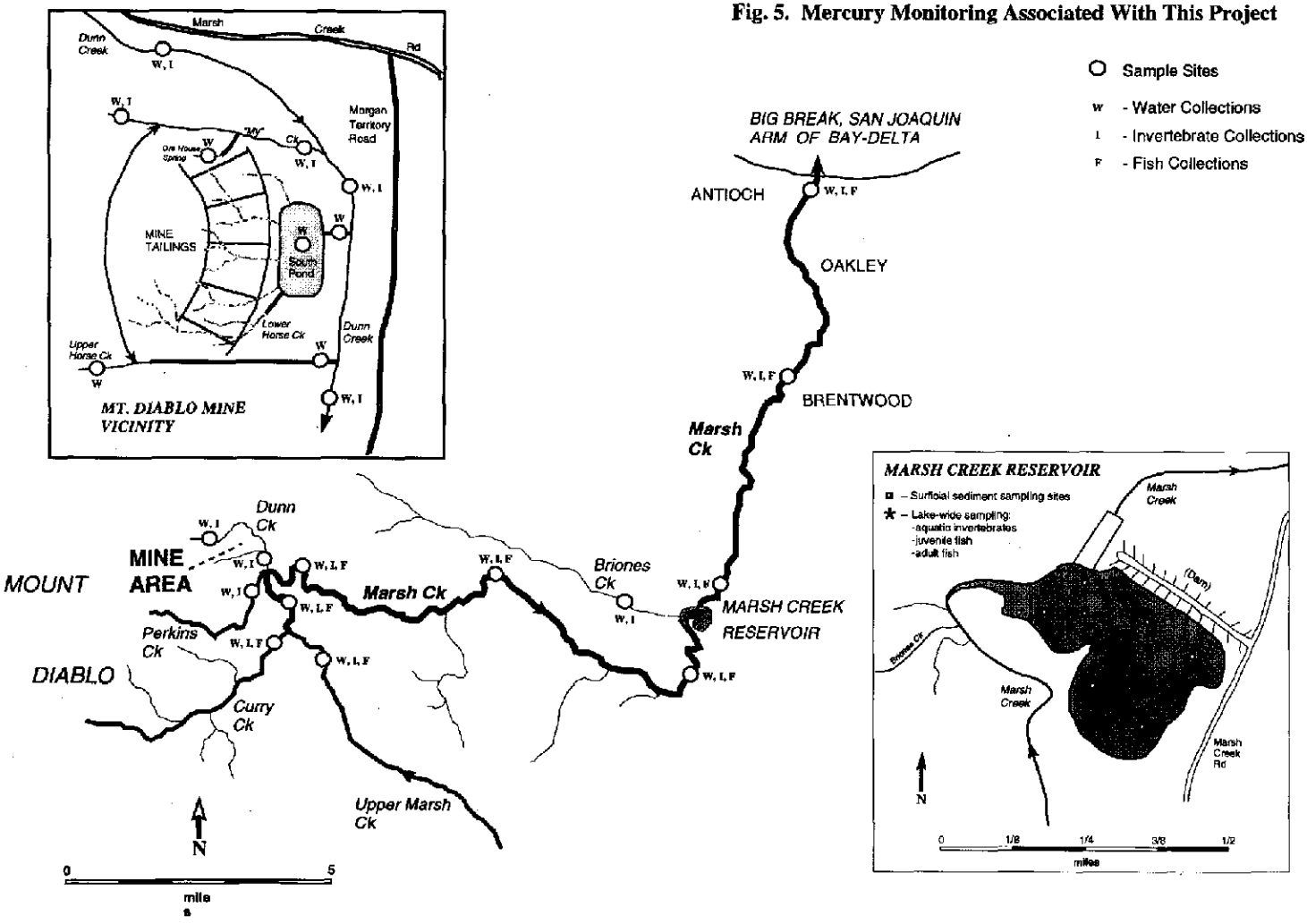
a. Current configuration



b. Proposed modifications

1. Construct diversion channel(s) to intercept downslope flows.
2. Divert upper Horse Ck past tailings directly to Dunn Ck.
3. Divert lower Horse Ck into South Pond.
4. Construct new South Pond outlet on east side.
5. Re-grade existing tailings (lessen angle and smooth).
6. Apply soil layer.
7. Revegetate new slope.
8. Pipe out spring flows, as applicable
9. Deepen South Pond (optional).
10. Lime South Pond (optional).

Fig. 5. Mercury Monitoring Associated With This Project



I-005271

TABLE 1. MT DIABLO MINE REMEDIATION PROJECT - BUDGET

Project Phase and Task	Direct Labor Hours	Direct Salary and Benefits	Overhead Labor (General, Admin. and Fee)	Service Contracts	Construction Contract (Material and Acquisition Contracts Included)	Misc. and Other Direct Costs	Total Cost
Task 1 Design Pre-Construction	200 576 598	55.68 51.26 35.02	37.86 34.85 23.81	50,000			153,500
Task 2 Main Diversion Channels/Piping	94.71	55.68	37.86		59,600	8,859	77,300
Task 3 Tailing Slope Reduction	368.83	55.68	37.86		230,000	34,500	299,000
Task 4 Topsoil Delivery and Placement	530.79	55.68	37.86		331,000	49,650	430,300
Task 5 Primary Revegetation	184.41	55.68	37.86		115,000	17,250	149,500
Task 6 Diversion Piping of Spring Flows	52.62	55.68	37.86		32,815	4,922	42,660
Task 7 Revegetation Tending	88	55.68	37.86		46,750		55,000
Task 8 Study of Modification of Sedimentation Pond (Optional)				25,000			25,000
Task 9 Monitoring and Data Evaluation				174,000 (40k + 18k/yr analytical)			174,000

GRAND TOTAL 1,406,000

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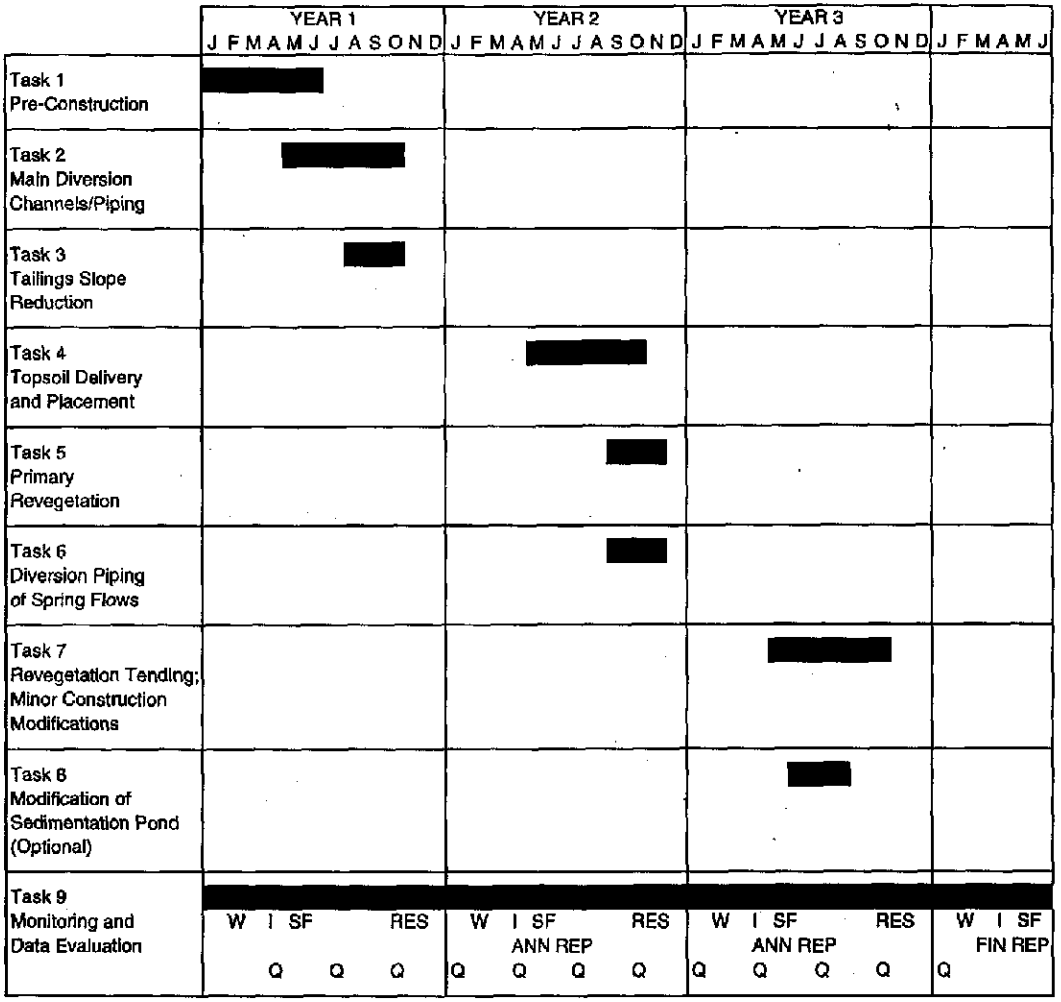
Table 2. Mt. Diablo Mine Remediation Project -- Schedule Milestones



W: Storm Season Water Sampling/Mass Balance
I: Stream Invertebrate Sampling
SF: Stream Fish Sampling
RES: Marsh Creek Reservoir Sediment/Biota Sampling

Q: Quarterly Progress Reports
ANN REP: Annual Reports
FIN REP: Final Project Report

I-005273

Cal/EPA

San Francisco
Bay Regional
Water Quality
Control Board

2101 Webster St. #500
Oakland, CA
94612
(510) 286-1255
FAX (510) 286-1380

Pete Wilson
Governor

July 24, 1997

To: CALFED Restoration Program Reviewers
From: Kim Taylor, San Francisco Bay Regional Water Quality Control Board

Re: Mt. Diablo Mercury Mine Remediation

Staff at the San Francisco Bay Regional Water Quality Control Board have recently undertaken a thorough review of mercury as it relates to water quality problems in the San Francisco Bay watershed. We have considered all aspects of the problem ranging from levels observed in fish tissue and the chemical form of mercury most prevalent in Bay waters to identification of ongoing sources and the costs of pollution prevention programs. Our working hypothesis is that the bulk of ongoing loadings to the Bay system come from abandoned mines in the Sacramento-Delta-Bay watersheds. In addition, we have found that mine remediation is probably the most cost-effective approach to reduce loadings. Contra Costa's proposed remediation will address our goal of reducing loading in the watershed, but it will also serve as a model for site characterization and cleanup at other sites that can be used to support a point- nonpoint loading offset program. Our long-term goal is to have an offset program that would provide an ongoing direction of funds towards such remediation projects.

We appreciate the time and effort CALFED is taking to review and fund ecosystem restoration projects. If you have any questions, please call me at (510) 286-3821 or email at KAT@gwgate.swrcb.ca.gov.

Sincerely,

Kim Taylor, PhD
Environmental Specialist III
Planning Division

Our mission is to preserve and enhance the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.

CONTRA COSTA CLEAN WATER PROGRAM

Make a Clear Difference

July 16, 1997

Donald P. Freitas
Program Manager

Kate Hansel
CALFED Bay-Delta Program
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

Dear Ms. Hansel:

The Contra Costa Clean Water Program (Program) strongly supports Contra Costa County's application for a 1997 Category III Ecosystem Restoration Projects and Programs grant to implement the Mt. Diablo Mercury Mine Site Remediation and Mercury Export Reduction Project. The Program consists of seventeen cities, the County, and the Contra Costa Flood Control and Water Conservation District working together to reduce or stop stormwater contamination under a joint Municipal NPDES Stormwater Permit.

The Program is aware that the County has been performing comprehensive assessment of mercury contamination and loading throughout the Marsh Creek Watershed. We are happy to see that this assessment has resulted in a remediation plan and this grant proposal. The proposed project is of special interest to the Program since effective remediation of this site would considerably reduce a direct source of bioavailable mercury to the Bay-Delta. The success of this project could lead to other similar mercury remediation projects in the Bay-Delta watersheds and throughout the state of California.

We believe this project has great merit with substantial rewards. We hope CALFED sees the merits of this remediation project and justly awards the grant.

Should you have any questions, please contact Mr. Donald Freitas, Contra Costa Clean Water Program Manager, at (510) 313-2373.

Sincerely,

Jack R. Hall
Chairperson, Management Committee
Contra Costa Clean Water Program

JH:TTW:lmb
g:\fldctl\NPDES\CalFed.t7
cc: J.M. Walford, Contra Costa County-Public Works
D. Freitas, Clean Water Program
D. Slotton, University of California at Davis

255 Glacier Drive, Martinez, CA 94553-4897 • Tel: (510) 313-2360 Fax: (510) 313-2301

I —0 0 5 2 7 5

I-005275

Item

Agreement No. _____

Exhibit _____

STANDARD CLAUSES – CONTRACTS WITH PUBLIC ENTITIES

Workers' Compensation Clause. Contractor affirms that it is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be i against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and Contractor affirms that it will comply wit provisions before commencing the performance of the work under this contract.

Claims Dispute Clause. Any claim that Contractor may have regarding the performance of this agreement including, but not limited to, claims for additional compensa extension of time, shall be submitted to the Executive Director, CALFED Bay-Delta Program or its designee within thirty days of its accrual. State and Contractor shall then attempt to negotiate a reso of such claim and process an amendment to this agreement to implement the terms of any such resolution. (NPWR)

Nondiscrimination Clause. During the performance of this contract, the recipient, Contractor and its subcontractors shall not deny the contract's benefits to any person on the of religion, color, ethnic group identification, sex, age, physical or mental disability, nor shall they discriminate unlawfully against any employee or applicant for employment be of race, religion, color, national origin, ancestry, physical handicap, mental disability, medical condition, marital status, age (over 40), or sex. Contractor shall insure th evaluation and treatment of employees and applicants for employment are free of such discrimination. Contractor shall comply with the provisions of the Fair Employme Housing Act (Government Code Section 12900 et seq.), the regulations promulgated thereunder (California Administrative Code, Title 2, Sections 7285.0 et seq.), the provi of Article 9.5, Chapter 1, Part 1, Division 3, Title 2 of the Government Code (Government Code Sections 11135 - 11139.5), and the regulations or standards adopted by the awa State agency to implement such article. Contractor or recipient shall permit access by representatives of the Department of Fair Employment and Housing and the awarding agency upon reasonable notice at any time during the normal business hours, but in no case less than 24 hours' notice, to such of its books, records, accounts, other sour information and its facilities as said Department or Agency shall require to ascertain compliance with this clause. Recipient, Contractor and its subcontractors shall give written n of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement. The Contractor shall include the nondiscrimin and compliance provisions of this clause in all subcontracts to perform work under the contract.

Availability of Funds. Work to be performed under this contract is subject to availability of funds, Category III.

Audit Clause. For contracts in excess of $10,000, the contracting parties shall be subject to the examination and audit of the State Auditor for a period of three years after payment under the contract. (Government Code Section 8546.7).

Payment Retention Clause. Ten percent of any progress payments that may be provided for under this contract shall be withheld per Public Contract Code Sections 10346 10379 pending satisfactory completion of all services under the contract.

Reimbursement Clause. If applicable, travel and per diem expenses to be reimbursed under this contract shall be at the same rates the State provides for unrepresented employe in accordance with the provisions of Title 2, Chapter 3, of the California Code of Regulations. Contractor's designated headquarters for the purpose of computing such expe shall be: _____.

Termination Clause. The State may terminate this contract without cause upon 30 days' advance written notice. The Contractor shall be reimbursed for all reasonable expe incurred up to the date of termination.

Drug-Free Workplace Certification. By signing this contract, the Contractor or grantee hereby certifies under penalty of perjury under the laws of the State of California the Contractor or grantee will comply with the requirements of the Drug-Free Workplace Act of 1990 (Government Code Section 8350 et seq.) and will provide a drug-free workp by taking the following actions:

1. Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying act to be taken against employees for violations.

2. Establish a Drug-Free Awareness Program to inform employees about all of the following:
   (a) The dangers of drug abuse in the workplace,
   (b) The person's or organization's policy of maintaining a drug-free workplace,
   (c) Any available counseling, rehabilitation and employee assistance programs, and
   (d) Penalties that may be imposed upon employees for drug abuse violations.

3. Every employee who works on the proposed contract or grant:

   (a) Will receive a copy of the company's drug-free policy statement, and
   (b) Will agree to abide by terms of the company's statement as a condition of employment on the contract or grant.

This contract or grant may be subject to suspension of payments or termination, or both, and the Contractor or grantee may be subject to debarment if the department determ that: (1) the Contractor or grantee has made a false certification, or (2) the Contractor or grantee violates the certification by failing to carry out the requirements noted abov

Americans With Disabilities Act. By signing this contract, Contractor assures the State that it complies with the Americans With Disabilities Act (ADA) of 1990, (42 U.S.C. 12 et seq.), which prohibits discrimination on the basis of disability, as well as all applicable regulations and guidelines issued pursuant to the ADA.

Conflict of Interest. Current State Employees: a) No State officer or employee shall engage in any employment, activity or enterprise from which the officer or employee rece compensation or has a financial interest and which is sponsored or funded by any State agency, unless the employment, activity or enterprise is required as a condition of reg State employment. b) No State officer or employee shall contract on his or her own behalf as an independent contractor with any State agency to provide goods or services.

Former State Employees: a) For the two-year period from the date he or she left State employment, no former State officer or employee may enter into a contract in which he or engaged in any of the negotiations, transactions, planning, arrangements or any part of the decision-making process relevant to the contract while employed in any capacity by State agency. b) For the twelve-month period from the date he or she left State employment, no former State officer or employee may enter into a contract with any State age if he or she was employed by that State agency in a policy-making position in the same general subject area as the proposed contract within the twelve-month period prior to hi her leaving State service.

Item 4 (p

Agreement No. _____

Exhibit _____

STANDARD CLAUSES – GENERAL CONDITIONS FOR PUBLIC WORKS CONTRACTS

LICENSE. No bidder may bid on work for which it is not properly licensed by the Contractor's State License Board. Joint Venture bidders must possess a Joint Venture License. Bidders for this Agreement must have _____ classification(s) of contractor's license, provide license number and expiration date and certify under penalty of perjury that the foregoing is true and correct.

~~**EXAMINATION OF BID DOCUMENTS AND SITE.** Bidder shall carefully examine site of work, plans and specifications. The bidder shall investigate conditions, character, quality of surface, or subsurface materials or obstacles to be encountered. No additions to the contract amount will be made because of the Contractor's failure to examine the site of work, plans and specifications.~~

SUBCONTRACTORS. (See Public Contract Code Section 4104.) The bidder shall set forth in its bid:

a. The name and business address of each subcontractor who will perform work or labor or render services in an amount in excess of one-half of one percent (.5%) of the General Contractor's total bid; and

b. The portion of work to be done by each subcontractor. (See Public Contract Code Section 4104.)

PAYMENT BOND. The Contractor shall furnish, concurrently with signing the contract, a Payment Bond to Accompany Construction Contract, Standard Form 807, in an amount not less than fifty percent (50%) of the amount of the contract when its bid exceeds $5000. Such bond shall be executed by the Contractor and a corporate surety approved by the State.

NOTICE. Failure to obtain a payment bond upon presentation of contract for contractor's signature ~~within ten (10) days of notification of award~~ shall cause the State to reject the bid.

WORKERS' COMPENSATION INSURANCE CERTIFICATION. Upon execution of the contract, the Contractor shall provide the State either with a certificate of insurance issued by an insurance carrier licensed to write workers' compensation insurance in the State of California, including the name of the carrier and date of expiration of the insurance, or a certificate of consent to self insure issued by the Director of the Department of Industrial Relations.

PREVAILING WAGE. It is hereby mutually agreed that the Contractor shall forfeit to the State a penalty of $50 for each calendar day, or portion thereof, for each worker paid by it, or subcontractor under it, less than the prevailing wage so stipulated. In addition the Contractor further agrees to pay to each worker the difference between the actual amount paid for each calendar day, or portion thereof, and the stipulated prevailing wage rate for the same. This provision shall not apply to properly registered apprentices.

MAXIMUM HOURS. It is further agreed that the maximum hours a worker is to be employed without overtime pay is limited to 8 hours a day and 40 hours a week and the Contractor shall forfeit, as a penalty to the State, $25 for each worker employed in the execution of the contract for each calendar day during which a worker is required or permitted to labor more than 8 hours in any calendar day or more than 40 hours in any calendar week in violation of Labor Code Sections 1810-1815, inclusive.

TRAVEL AND SUBSISTENCE PAYMENTS. Travel and subsistence payments shall be paid to each worker needed to execute the work, as such travel and subsistence payments are defined in the applicable collective bargaining agreements filed in accordance with Labor Code Section 1773.8.

APPRENTICES. Properly registered apprentices may be employed in the prosecution of the work. Every such apprentice shall be paid the standard wage paid to apprentices under the regulations of the craft or trade at which he or she is employed, and shall be employed only at the work of the craft or trade to which he or she is registered. The Contractor and each subcontractor must comply with the requirements of Labor Code Section 1777.5 and any related regulations regarding the employment of registered apprentices.

SUBSTITUTIONS. Pursuant to Section 3400 of the Public Contract Code, should the Contractor seek to substitute a brand of materials other than specified, the Contractor shall submit data substantiating the request for substitution of "an equal" item. The substantiating data must be presented for approval within thirty-five (35) days after the award of the agreement. The State shall be the sole judge as to the comparative quality and suitability of "an equal" item. (NFWF)

I-005277

ANTI-TRUST CLAIMS. The Contractor offers and agrees and will require all of his subcontractors and suppliers to agree to assign to the awarding body all rights, title, and interest in and to all causes of action they may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act [Chapter 2 (commencing with Sec. 165700) of Part 2 of Division 7 of the Business and Professions Code], arising from purchases of goods, services, or materials, pursuant to the public works contract or the subcontract. The assignment made by the Contractor and all additional assignments made by the subcontractors and suppliers shall be deemed to have been made and will become effective at the time the awarding body tenders final payment to the Contractor, without further acknowledgment or the necessity of tendering to the awarding body any written assignments.

If an awarding body receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under Government Code Sections 4550-4554, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the public body any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the public body as part of the bid price, less the expenses incurred in obtaining that portion of the recovery.

Upon demand in writing by the assignor, the assignee shall, within one year from such demand, reassign the cause of action assigned under Government Code Sections 4550-4554, if the assignor has been or may have been injured by the violation of law for which the cause of action arose and (a) the assignee has not been injured thereby, or (b) the assignee declines to file a court action for the cause of action.

PROGRESS PAYMENTS

a. Ten percent of any progress payments that may be provided for under this contract shall be withheld pending satisfactory completion of all services under the contract. The Contractor may substitute securities for such retentions and receive any interest accrued provided in Section 22300 of the Public Contract Code.

b. No progress payments shall be made unless the Contractor, upon execution of the contract, furnishes a faithful performance bond for not less than one-half the total amount payable under the contract.

PAYROLL RECORDS. The Contractor and each subcontractor shall comply with Labor Code Section 1776 regarding payroll records.

NONCOLLUSION AFFIDAVIT. All bidders shall submit with their bids a signed and notarized Noncollusion Affidavit (DWR 4206).

LABOR CODE PROVISIONS. Pursuant to Sections 1770 et seq. of the California Labor Code, the Director of the State Department of Industrial Relations has made the general prevailing wage determination covering the locality where work for this contract is to be performed. A copy of the publication **General Prevailing Wage Rates** is on file for inspection at the State Department of Water Resources, Contract Services Office, 1416 Ninth Street, Sacramento, CA.

The Contractor agrees to post a copy of the **General Prevailing Wage Determination** for the locality of each job site. The Contractor also agrees to comply with all requirements of the California Labor Code and to pay the forfeiture penalties and monies which may become due as provided in Sections 1775 and 1813 of that Code.

UNDOCUMENTED ALIENS. No bidder or Contractor shall be eligible to bid for or receive a public works or purchase contract, who has, in the preceding five years, been convicted of violating a State or federal law respecting the employment of undocumented aliens.

Agreement No. Item

Exhibit

STANDARD CLAUSES –
INSURANCE REQUIREMENTS

Contractor shall furnish to the State (NFWF) a certificate of insurance stating that there is liability insurance presently in effect for the contractor of not less than $1,000,000 per occurrence for bodily injury and property damage liability combined.

The certificate of insurance must include the following provisions:

1. The insurer will not cancel the insured's coverage without 30 days' prior written notice to the State.
2. The State of California (NFWF), its officers, agents, employees, and servants are included as additional insured, but only insofar as the operations under this contract are concerned.

Contractor agrees that the bodily injury liability insurance herein provided for shall be in effect at all times during the term of this contract. In the event said insurance coverage expires at any time or times during the time of this contract, contractor agrees to provide at least thirty (30) days prior to said expiration date, a new certificate of insurance evidencing insurance coverage as provided for herein for not less than the remainder of the term of the contract, or for a period of not less than one (1) year. New certificates of insurance are subject to the approval of the Department of General Services and contractor agrees that no work or services shall be performed prior to the giving of such approval. In the event contractor fails to keep in effect at all times insurance coverage as herein provided, State (NFWF) may, in addition to any other remedies it may have, terminate this contract upon the occurrence of such event.

I-005279

STANDARD CALIFORNIA NONDISCRIMINATION CONSTRUCTION CONTRACT SPECIFICATIONS

(GOVERNMENT CODE, SECTION 12990)

Item 6

These specifications are applicable to all state contractors and subcontractors having a construction contract or subcontract of $5,000 or more.

1. As used in the specifications:

   a. "**Administrator**" mean Administrator, Office of Compliance Programs, California Department of Fair Employment and Housing (DFEH), or any person to whom the Administrator delegates authority.

   b. "**Minority**" includes:

   (i) **Black** (all persons having primary origins in any of the black racial groups of Africa, but not of Hispanic origin);

   (ii) **Hispanic** (all persons of primary culture or origin in Mexico, Puerto Rico, Cuba, Central or South America or other Spanish derived culture or origin regardless of race);

   (iii) **Asian/Pacific Islander** (all persons having primary origins of any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent or the Pacific Islands); and

   (iv) **American Indian/Alaskan Native** (all persons having primary origins in any of the original peoples of North America and who maintain culture identification through tribal affiliation or community recognition).

2. Whenever the contractor or any subcontractor subcontracts a portion of the work, it shall physically include in each subcontract of $5,000 or more the nondiscrimination clause in this contract directly or through incorporation by reference. Any subcontract for work involving a construction trade shall also include the Standard California Construction Contract Specifications, either directly or through incorporation by reference. Any subcontract for work involving a construction trade shall also include the Standard California Construction Contract Specifications, either directly or through incorporation by reference.

3. The contractor shall implement the specific nondiscrimination standards provided in paragraphs 6(a) through (e) of these specifications.

4. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the contractor's obligations under these specifications, Government Code, Section 12990, or the regulations promulgated pursuant thereto.

5. In order for the nonworking training hours of apprentices and trainees to be counted, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor or the California Department of Industrial Relation

6. The contractor shall take specific actions to implement its nondiscrimination program. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor must be able to demonstrate fully its efforts under Steps a. through e. below:

   a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and at all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction projec The contractor shall specifically ensure that all leadpersons, superintendents, and other on-site supervisory personnel are aware of and carry out the contractor's obligations to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

   b. Provide written notification within seven days to the director of DFEH when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process ha impeded the Contractor's efforts to meet its obligations.

   c. Disseminate the Contractor's equal employment opportunity policy by providing notice of the policy to unions and training, recruitment and outreach programs and requesting their cooperation in assisting the Contractor to meet its obligations; and by posting the company policy on bulletin boards accessible to all employees at each location where construction work is performed.

Item B

NONDISCRIMINATION COMPLIANCE STATEMENT

COMPANY NAME

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

OFFICIAL'S NAME

DATE EXECUTED | EXECUTED IN THE COUNTY OF

PROSPECTIVE CONTRACTOR'S SIGNATURE

PROSPECTIVE CONTRACTOR'S TITLE

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

Item 9 (P/2)

CERTIFICATE OF INSURANCE

This is to verify that the following described policy or policies have been issued to the insureds named below:

Bidder:

and The State of California and all officers and employees thereof

With respect to the work performed under Contract # _____, Specification # _____.

for _____

_____

* Coverage	Company & Policy #	Term Mo.	Term Day	Term Year	Limits of Liability
A)		___	___ to ___	___	
B)		___	___ to ___	___	
C)		___	___ to ___	___	
D)		___	___ to ___	___	

It is further certified that:

The policy(ies) become(s) effective not later than the time of commencement of work under the aforementioned Contract.

The policy(ies) name(s), as additional insured with the bidder, the State and all officers and employees of the State.

The minimum limits of coverage of the aforementioned insureds are as follows:

Combined Single Limit ..... $ _____
(each occurrence)

*Workers Compensation not applicable on this form.

I —005282

I-005282

Item 9 (P 2/2)

Under the terms of the policy(ies):

a. The insurer(s) shall not cancel or modify the policy(ies) without 30 days prior written notice to the Director of Water Resources.

b. The State is not responsible for any premiums or assessments on the policy(ies).

A) Dated: _____ Insurers Authorized Representative (Signature)

_____

* Insurer or Insurance Organization

_____

Address

_____

Phone No. _____

B) Dated: _____ Insurers Authorized Representative (Signature)

_____

* Insurer or Insurance Organization

_____

Address

_____

Phone No. _____

C) Dated: _____ Insurers Authorized Representative (Signature)

_____

* Insurer or Insurance Organization

_____

Address

_____

Phone No. _____

D) Dated: _____ Insurers Authorized Representative (Signature)

_____

* Insurer or Insurance Organization

_____

Address

_____

Phone No. _____

** Must be California admitted insurer or qualified non-admitted insurer as defined in California Insurance Code.*

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I-005283

PAYMENT BOND TO ACCOMPANY CONSTRUCTION CONTRACT

(CIVIL CODE SECTION 3247)

Item 10.

BOND NO. _____

The premium on this bond is $ _____ for the term _____

Know All Men By These Presents:

THAT The State of California, acting by and through the _____

_____

has awarded to _____ whose address is

(CONTRACTOR/PRINCIPAL)

_____ as Principal, a contract for the work described as follows:

WHEREAS, The provisions of Civil Code Section 3247 require that the Principal file a bond in connection with said contract and this bond is executed and tendered in accordance therewith.

NOW THEREFORE, Principal and _____, a corporation organized

(SURETY)

under the laws of _____, and authorized to transact a general surety business in the State of California, as Surety, are held and firmly bound to the People of the State of California in the penal sum of _____ ($_____), for which payment we bind ourselves, our heirs, executors, administrators, successors and assigns jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH,

1 That if said Principal or its subcontractors shall fail to pay any of the persons named in Civil Code Section 3181, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the Principal and subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to such work and labor, that the Surety herein will pay for the same, otherwise this obligation is to be void. In case suit is brought upon this bond, the Surety will pay a reasonable attorney's fee to be fixed by the court.

2. This bond shall inure to the benefit of any of the persons named in Civil Code Section 3181 as to give a right of action to such persons or their assigns in any suit brought upon this bond.

3. The aggregate liability of the Surety hereunder, including costs and attorneys fees, on all claims whatsoever shall not exceed the penal sum of the bond in accordance with the provisions of Section 996.470(a) of the Code of Civil Procedure.

4. This bond is executed by the Surety, to comply with the provisions of Chapter 7, Title 15, Part 4, Division 3 of the Civil Code and of Chapter 2, Title 14, Part 2 of the Code of Civil Procedure and said bond shall be subject to all of the terms and provisions thereof.

5. This bond may be canceled by the Surety in accordance with the provisions of Sections 996.310 et. seq. of the Code of Civil Procedure.

6. This bond to become effective _____.

_____ (NAME OF SURETY)

_____ (ADDRESS)

I certify (or declare) under penalty of perjury that I have executed the foregoing bond under an unrevoked power of attorney.

Executed in _____ (CITY AND STATE) on _____ (DATE)

under the laws of the State of California.

▶ _____

(SIGNATURE OF ATTORNEY-IN-FACT)

_____

(PRINTED OR TYPED NAME OF ATTORNEY-IN-FACT)

Item 11

Agreement No. _____

Exhibit _____

NONCOLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID FOR PUBLIC WORKS

STATE OF CALIFORNIA)

)ss

COUNTY OF _____)

_____, being first duly sworn, deposes and
(name)

says that he or she is _____ of
(position title)

_____
(the bidder)

the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

DATED: _____ By _____
(person signing for bidder)

Subscribed and sworn to before me on

_____

_____
(Notary Public)

(Notarial Seal)